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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,689

12/11/2003

Scott A. Flatness

EH-10964 (03-434)

8978

34704

7590

08/16/2005

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EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Best Available Copy

## Office Action Summary

Application No.

10/733,689

Applicant(s)

FLATNESS ET AL.

Examiner

Sharidan Carrillo

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05192005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitations of claim 21 constitute new matter, not supported by the specification as originally filed. Paragraph 40 of the specification teaches "off-radial". However, claim 21 is claiming "radially inward".

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13-23 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 is indefinite because the preamble recites removing the material and the positive method steps only recite loosening the material. Claim 13 is further indefinite because it is unclear what is meant by a pressurized gas to substantially resist upstream infiltration of a contaminant. Claim 13 is indefinite because it is unclear the structural relationship between the vessel and the conduit. Claim 15 is indefinite because it is unclear what is meant by a major portion of air. Claim 16 is indefinite

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because it is unclear what is meant by a radially inward velocity component and a longitudinally downstream velocity component. Claim 16 is indefinite because if the flowpath length within the conduit is not known, how can one determine 20% of the length. Consequently, it is unclear what is meant by downstream 20% of the flowpath length. Claims 17 and 18 are indefinite because the gas lacks fuel only prior to being introduced into the conduit.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ruegg et al. (US2004/0112306).

Ruegg et al. teach cleaning of contaminants in a boiler. Ruegg teaches introducing a fuel (4) and an oxidizer (3) into the conduit (1) and igniting the air/fuel to produce a shockwave that is directed through the conduit and into the boiler to remove deposits (Abstract, paragraphs 4, 11, 36). In reference to the purge and in view of the indefiniteness, refer to paragraph 45. In reference to claim 14, refer to paragraph 4. In reference to claims 15, 17 and 18, refer to paragraph 45. In reference to claim 16 and in view of the indefiniteness, the limitations are met by Ruegg (Fig. 2).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plavnik et al. (6684823) in view of Ruegg (2004/0112306).

Plavnik et al. teach a method for removal of ash deposits from a heat exchanger

in a boiler. Plavnik et al. teach introducing a fuel and an oxidizer into a conduit and igniting the air/fuel to produce a pressure shock wave that is directed through the conduit and into the boiler to remove the ash deposits (col. 12, lines 1-13, col. 2, lines 1-17).

Plavnik teaches a purge cycle prior to the initial startup. Plavnik fails to teach purging with a pressurized gas between cycles. Ruegg teaches a device or in-line cleaning of boilers to remove deposits. In paragraph 45, Ruegg teaches that following ignition, the gas mixture of the fuel and oxidizing agent, the inner pipe is cleaned of residue by purging with compressed air via compressed air reservoir (Fig. 2). It would have been obvious to a person of ordinary skill in the art to modify the method of Plavnik to further include purging, as taught by Ruegg, for purposes of removing residual contaminants. Additionally, it is notoriously well known and conventional in the art to purge any system for purposes of removing contaminants.

In reference to resisting upstream infiltration of contaminants, the limitations are met by Plavnik in view of the indefiniteness as previously discussed. In reference to claim 14, refer to the abstract, col. 2, lines 24-31 of Plavnik. In reference to claim 15, refer to Ruegg. In reference to claims 16 and 19, Plavnik teaches different embodiments in which air is introduced along different lengths of conduit. In reference to claims 17-18, refer to Ruegg. In reference to claims 20-22, Plavnik in view of Ruegg fails to teach the limitations. However, it would have been within the level of the skilled artisan to introduce the gas in any desired manner in order to effectively remove and

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thereby clean the system of residual contaminants. In reference to claim 23, refer to Plavnik.

11. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruegg et al. (2004/0112306).

Ruegg fails to teach the limitations as recited in claims 19-22. However, it would have been within the level of the skilled artisan to introduce the gas in any desired manner in order to effectively remove and thereby clean the system of residual contaminants.

### ***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 13-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-9 of copending Application No. 10/718855. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are directed to cleaning a

surface by introducing a fuel and oxidizer, initiating a reaction to cause a shockwave, and introducing a pressurized purge gas to the conduit.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

14. The rejection of the claims under 112, first scope is withdrawn in view of the newly amended claims. However, the rejection of the claims, under 112, first paragraph, new matter has been introduced for the reasons recited above.

15. The rejection of the claims, as being anticipated by Plavnik et al. is withdrawn in view of arguments presented by applicant. The secondary reference of Ruegg has been introduced to cure the above deficiency. In reference to new claims 17-23, refer to the art rejections as described above.

16. This application contains claims 1-12 are drawn to an invention nonelected with traverse in Paper No. 6/15/2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Primary Examiner  
Art Unit 1746

  
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